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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,268	08/07/2003	He Huang	C-2940	8434

7590

11/02/2005

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EXAMINER

NGUYEN, CAM N

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/635,268	Applicant(s) HUANG ET AL.	
	Examiner Cam N. Nguyen	Art Unit 1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Election/Restriction

1. Applicant's election without traverse of Group I, claims 1-10, in the reply filed on September 21, 2005 is acknowledged.

Response to Amendment

2. Applicants' amendment/response, filed September 21, 2005, has been made of record and entered. The nonelected claims 11-16 have been canceled.

Claims 1-10 are currently pending in the application and under consideration.

Claim Objections

3. Claims 1 & 9 are objected to because of the following informalities:
 - A. In claim 1, line 7, --a—should be inserted before “surface area”.
 - B. In claim 1, last line, “greater than about fifty square meters per gram” should be changed to --greater than about 50 m²/g--.
 - C. In claim 9, last line, same as in B.

Appropriate correction is required.

Claim Rejections - 35 USC § 102(a)

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1754

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-5 & 9-10 are rejected under 35 U.S.C. 102(a) as being anticipated by Reesink et al., "hereinafter Reesink", (US Pat. 6,524,994 B1).

Reesink discloses a nickel catalyst comprising at least one structural promoter selected from the group consisting of oxides of metals, metalloids, and combinations thereof, etc., wherein the catalyst having a nickel surface area of at least 10 m²/g, etc. (see col. 4- col. 5, claim 1). Suitable structural promoters including alumina (see col. 5, claims 2 & 3). The nickel surface area is between 10 and 65 m²/g (see col. 5, claim 9).

No patentable distinction is seen between the claimed sulfur scrubber assembly and the catalyst disclosed by Reesink. Thus, the claims are anticipated by the reference.

Claim Rejections - 35 USC § 102(e)

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-5 & 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Park (US Pat. 6,706,660 B2).

Park discloses a lean NO_x catalyst comprising: a substrate; an oxide support material deposited on the substrate; a dopant selected from a group including Ni which is introduced into the oxide support material deposited on the substrate, etc. (see col. 17- col. 18, claim 1). The substrate is a ceramic honeycomb substrate including at least one of cordierite, alumina and titania (see col. 18, claims 2 & 4).

With respect to the claimed "nickel reactant surface area", it is considered the catalyst of Park also possesses the same surface area in view of the same catalytic metal and support material disclosed.

No patentable distinction is seen between the claimed sulfur scrubber assembly and the catalyst disclosed by Park. Thus, the claims are anticipated by the reference.

8. Claims 1-5, 7, & 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Dindi et al., "hereinafter Dindi", (US Pat. 6,733,692 B2).

Dindi discloses a catalyst which includes at least a catalytically active metal. The metals can be supported or unsupported. Suitable metals selected from a group including Ni, and suitable supports selected from a group including Al₂O₃ foam support. See col. 4, ln 22-32.

With respect to the claimed "nickel reactant surface area", it is considered the catalyst of Dindi also possesses the same surface area in view of the same catalytic metal and support material disclosed.

No patentable distinction is seen between the claimed sulfur scrubber assembly and the catalyst disclosed by Dindi. Thus, the claims are anticipated by the reference.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reesink et al., "hereinafter Reesink", (US Pat. 6,524,994 B1), Park (US Pat. 6,706,660 B2), Dindi et al., "hereinafter Dindi", (US Pat. 6,733,692 B2), as applied to the claims above, and further in view of Giraitis et al., "hereinafter Giraitis", (US Pat. 3,162,606).

Reesink, Park, and Dindi disclose catalysts as described above, except for the support structure being a pellet bed.

It would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have employed such known pellet structure support in Reesink, Park, and Dindi because it is known as useful catalyst support, as evidenced by Giraitis (see Giraitis at col. 2, ln 12).

Citations

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. All references are cited for related art. See PTO-892 Form prepared attached.

Art Unit: 1754

Conclusion

12. Claims 1-10 are pending. Claims 1-10 are rejected. No claims are allowed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cam N Nguyen, whose telephone number is 571-272-1357. The examiner can normally be reached on M, W, R, & F, 9:00 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nguyen/cnn *cnn*
October 28, 2005

Cam Nguyen
CAM N. NGUYEN
PRIMARY EXAMINER

Art Unit - 1754